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(71) Applicant (for all designated States except US):
PROSPECT PHARMA [US/US]; 6480-D Dobbin
Road, Columbia, MD 21045 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BROWN, Jonathan,
Miles [GB/US]; 13912 North Gate Drive, Silver Spring,

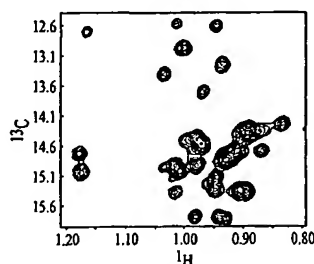
MD 20906 (US). HOMANS, Steve, W. [GB/GB];
3 Hilton Mews, Bramhope, Leeds LS16 9LF (GB).
CHENG, Minn-Chang [US/US]; 6116 Syracuse Court,
Clarksville, MD 21029 (US). CHAYKOVSKY, Michael
[US/US]; 9217 Quick Fox, Columbia, MD 21045-5312
(US). MURRAY, Jenny, Hong [US/US]; 9717 Dixie
Ridge Terrace, Gaithersburg, MD 20882 (US).

(74) Agents: FIGG, E., Anthony et al.; Rothwell, Figg, Ernst
& Manbeck, P.C., 1425 K Street, N.W., Suite 800, Wash-
ington, DC 20005 (US).

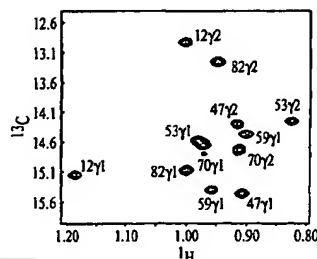
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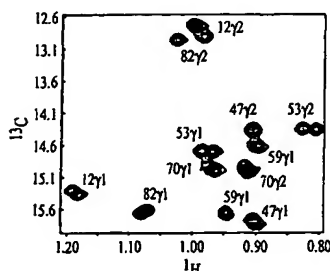
(54) Title: METHOD FOR OBTAINING DYNAMIC AND STRUCTURAL DATA PERTAINING TO PROTEINS AND PRO-
TEIN/LIGAND COMPLEXES



A



B



C

(57) Abstract: This invention provides an NMR method
for obtaining both entropic and enthalpic data on proteins
and protein/ligand complexes which can be used to obtain
accurate structural and dynamic data of proteins and pro-
tein complexes having a wide range of molecular weights.
An embodiment of the invention provides proteins which
contain at least one bond vector whose dynamics are to
be measured and which is surrounded by NMR inactive
nuclei, and amino acids for synthesis of the proteins via
chemical means or biological expression. The NMR meth-
ods using specifically labeled proteins for analysis result in
maximization of the sensitivity and resolution of the NMR
experiments, and minimization of the loss of signal due to
diffusion.



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PCT/US03/18254

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A 61B 5/055; G01N 33/53

US CL : 424/9.34, 9.341; 435/7.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/9.34, 9.341; 435/7.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EICHELE et al. Nitrogen-14 Coupled Dipolar-Chemical Shift 13C NMR Spectra of the Amide Fragment of Peptides in the Solid State, J. Phys.Chem. 1993, Vol. 97, pages 8909-8916, see entire document.	1-11
A	SCHWARZINGER et al. Sequence-Dependent Correction of Random Coil NMR Chemical Shifts, J. Phys.Chem. 2001, Vol. 123, pages 2970-2978, see entire document	1-11
A	US 5,989,827 A (FESIK et al.) 23 November 1999 (23.11.1999), see entire document.	1-11
A	US 5,891,643 A (FESIK et al.) 06 April 1999 (06.04.1999), see entire document.	1-11



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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
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Facsimile No. (703)305-3230

Authorized officer

B. Dell Chism

Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

PCT/US03,

Continuation of B. FIELDS SEARCHED Item 3:
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